

PROTO-TIBETO-BURMAN AS A TWO-TONE LANGUAGE? SOME EVIDENCE FROM
PROTO-TAMANG AND PROTO-KAREN

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O. Introduction¹

In his 1972 study "The Sino-Tibetan tonal system", Paul K. Benedict proposed the reconstruction of a 2-tone system at the Proto-Sino-Tibetan (PST) level. In support of this proposal he observed that from two to four tone classes, of which two seemed more basic or more ancient than the others, had been reconstructed independently in several sub-families of Sino-Tibetan (ST). He claimed that regular correspondences across Chinese, Burmese, Karen, Nungish, and (less exactly) Kachin and Kuki justified the reconstruction of these two basic tones at the PST level. The other Tibeto-Burman (TB) tone-systems, he predicted, "will eventually be shown to correlate with this basic TK [Tibeto-Karen] two-tone system." (1972:26)

In a 1973 paper, "Tibeto-Burman tones with a note on teleo-reconstruction", Benedict treated his reconstruction of two tones at the PST level as an illustration of a method he called "teleo-reconstruction", with the gloss "reconstruction based on relatively isolated correspondences at a distance, without the step-by-step reconstruction of one or more intervening links". The method was to be used "as a kind of 'probing' of possibilities", which might lead, as Benedict claimed in the case of the PST tones, to "a 'premature' but firm reconstruction" at the level of the "ultimate proto-language" (in this case PST). Once the PST system had been proposed, it remained to confirm the reconstruction at the lower, Proto-Tibeto-Burman (PTB) or Proto-Tibeto-Karen (PTK) levels.

In the same article, he tried to fit a few additional TB languages into his theory, and claimed that data from the Tamang group² in Nepal showed a good

¹ A preliminary version of this paper was read at the XIIIth Conference on Sino-Tibetan Languages and Linguistics, Charlottesville, Virginia, October 1980. I am grateful to participants for several useful comments and corrections.

Abbreviations for the names of languages follow Jones: BP = Bassein Pho; BS = Bassein Sgaw; MP = Moulmein Pho; MS = Moulmein Sgaw; Pl = Palaychi, T = Taungthu.

² What I call here the "Tamang group" for short is Shafer's "Gurung Branch" of the Bodish Section of the Bodic Division of Sino-Tibetan. I usually refer to it as TGTM (Tamang-Gurung-Thakali-Manangba) from the names of the main languages of the group. It also includes a few as yet undescribed languages

correlation with the PST tones *A and *B, thus strengthening his hypothesis. He was also impressed with typological similarities in the historical development of Proto-Tamang (PT) and Proto-Karen (PK). He concluded from both types of evidence that since PT was far removed from both Karen and Burmese-Lolo (BL), the uncovering of some relationship between its tone system and that of these two other groups suggested that a similar system should be reconstructed for PTB itself.

In the present paper I have undertaken a comparison of Tamang and Karen, to see if the result can be of use in reconstructing the tonal system of PTB (or PTK if one prefers). This seems to me to be in the spirit of Benedict's method of "teleo-reconstruction". The negative result may, however, be an indication that I have fallen into the trap of "uncritical use of teleo-reconstruction", which, Benedict warned, "can lead to linguistic disaster"! (Benedict 1973:130).

I. The typological arguments

Some of Benedict's arguments are typological. Two of these interest us here: 1) He remarks that the Tamang tonal split parallels the Karen tonal split. 2) He mentions the recurrence in TB languages geographically remote and genetically distant on the TB family tree of some phonetic and phonemic features associated with tones derived from PST *B: glottality and high pitch.

1.1 The tonal split

Benedict underlines the fact that Proto-Tamang underwent a tonal split patterning "precisely as in Karen" (1973:135), i.e. a proto-system with two main tones developed allotones dependent upon the initial, with original voiceless producing high allotones, and original voiced low allotones. I am surprised at the weight Benedict seems to give to this fact since this split is paralleled in all the languages of the area: Thai, Chinese, Miao-Yao, and Vietnamese, and is more of an areal feature than a family trait. There are very good phonetic explanations for the correlation of voicelessness with high pitch, and voice with low pitch;³ consequently the recurrence of the diachronic shift from a voicing contrast on the initial to a tonal contrast means little for genetic relationship.

Secondly, the parallel between the Karen and Tamang splits is not very exact. The main point of difference is in the structure of the reconstructed tonal systems. If we can leave aside as marginal the existence in Proto-Karen of a third tonal category on open syllables (Haudricourt 1975), which sets this system apart from the two-tone system of Proto-Tamang, we cannot ignore the fact that Proto-Tamang requires the existence of a tonal opposition on checked syllables (yielding four tones on *checked syllables, as well as on *smooth syllables, after the split) while there is no trace of a tonal contrast on Proto-Karen *checked syllables. Checked syllables are numerically significant in Tamang, and there is no reason to regard them as a secondary development.

1.2 Glottality and high pitch in tones derived from PST *B

spoken in Northern Nepal.

³ Cf. J.M. Hombert, J.J. Ohala and W.G. Ewan, "Phonetic explanations for the development of tones", *Language* 55:1 (1979).

On this point Benedict did not have any Tamang data. It seems at first that my data on the subject confirms Benedict's views.

1.21 Glottality

In the Tamang dialect of Risiangku (Mazaudon 1973:63) I noted an occasional glottal stop (but no creak) on the end of short monosyllables under tone 1 (derived from *B with a *voiceless initial). In Manangba I noted creakiness (but no glottal stop) as the regular realization of tone 3 (*B-voiced). On the other dialects the data available is not precise enough to answer this question.

The association of glottality of one sort or another with reflexes of tone *B could be taken as a residual feature, but we must observe that in each case the glottalized tone happens to be the highest tone in the system synchronically. The phonetic conditioning of creakiness by an excessively high pitch is in no way as universal as the conditioning of low pitch by voiced initials mentioned above, but it is frequent enough that, if we find a link of proto-tone *B with glottality only when the modern reflex is high pitched, we may suspect an independent development of that feature in each case.

We may observe that in Karen the same correlation of synchronic high pitch and creaky voice occurs. According to Jones' description, in all dialects which have creakiness (as opposed to a final glottal stop, which comes from an ancient final occlusive), it is the highest tone in the system which carries it⁴ (see Table §2). This casts doubt on the etymological value of glottality as a feature of tone *B.

1.22 The relative pitch of reflexes of *A and *B

Across Tamang languages, tones 1 and 3 (issued from a PT tone which Benedict identified with his PST *B) are statistically higher than tones 2 and 4 (issued from PST *A). Still, there is so much variation in pitch and melody among these languages⁵, corresponding to a rather shallow time-depth, that I doubt whether such a relationship across the ST family could be anything but chance.

Typological observations can lead to a hypothesis, but the demonstration of the existence of a two-tone system at the PST level depends upon the establishment of a regular correspondence between the tone classes reconstructed for each branch of the family. This is what we are going to consider now. Actually, such a correspondence, if established, would only demonstrate a common origin for the basic tone systems of all ST languages; it would not prove that the distinctive feature was tone in the common language, since parallel development would remain a likely hypothesis. In the following sections I will reexamine Benedict's evidence for establishing a correlation between PT tones and PK tones, adding some more cognate sets of similar standing, show that a correlation cannot be established, and offer some reflections on the reliability of conclusions arrived at through "teleo-reconstruction" of the kind Benedict advocated in his study, and which I have tried to apply here.

⁴ Palaychi is the only dialect which has two creaky tones (transcribed -q by Jones). But in that dialect creakiness is found on reflexes of both *A and *B.

⁵ For phonetic detail see Mazaudon 1978.

Table: Correspondences between the tonal categories of Luce and the reconstructed systems of Haudricourt, Jones, and Burling, with realization in modern dialects

Luce	PK tone	Haudricourt 1946-75		Jones 1961		Burling tn. initial	Modern dialects (Jones) ¹						
		tone	initial	tone	init.		Pa-O	MP	BP	Pl.	MS	BS	
I	.A	level ()	voiced	\'	+asp	3	continuant aspirated	-	-	/	/	-	-
II	A	level ()	voiceless, glottalized	\'	-asp	3	voiceless voiced/?	-	-	/	\q	/	/
III	A	level ()	aspirated	\h	+asp	4	continuant/ γ aspirated/s	\	\	\	\q	/	/
IV	B	falling (-')	voiced	/'	+asp	1	continuant aspirated	^	/	/'	\	\	\
V	B'	rising (-")	voiceless glottalized	\h	-asp	4	voiceless voiced/?/ γ ²	\	/'	\	\q	/	/
Va	B'	rising (-")	aspirated		+asp	4	aspirated/s	\	/'	\	/q	/	/
VIa	B	falling (-')	voiceless glottalized	/q	-asp	2	voiceless voiced/?	/	/'	\	\q	/'	\
VI	B	falling (-')	aspirated	/q	+asp	2	continuant aspirated/s	/	/'	\	/q	/'	\
VII	C	checked (-t)	voiced	\?	+asp	γ ¹	continuant aspirated	\?	-?	\?	/	\?	\?
VIII	C	checked (-t)	voiceless glottalized aspirated	/?	+asp	γ ²	all	/?	\?	\?	\q	-?	-?

¹ "" represents "glottal constriction", which Jones considers as the high tone allophone of glottal stop (and transcribes "?") in the relevant dialects. "q" in Pl is "lenis glottal stop", distinct from glottal stop, which is rare.

² Burling considers the MP tonal reflex of this category and the following one as "irregular".

First let us review the tonal systems reconstructed within the two groups, and the relationship proposed by Benedict between these and his PTK proto-system of *A and *B.

II. Proto-Karen

For Proto-Karen I have followed Haudricourt's latest theory of four proto-tones, two main open tones *A and *B, a somewhat secondary tone which I called *B' (corresponding to Luce's small correspondence set V) and a checked tone *C (or absence of tone on checked syllables).⁶ Here, in tabular form, is the relation between initials, proto-tone categories, and Luce's correspondence sets (roman numerals) as modified by Jones (1971):

		*A	*B	*B'	*C
*aspirated	(high series)	III	VI	Va	VIII
*voiceless unaspirated; *glottalized	(mid series)	II	VIa	V	
*voiced	(low series)	I	IV		VII

For the reconstruction of individual words I have used tentative forms proposed by Haudricourt in a 1975 manuscript, although I have tampered with many of them.⁷ Haudricourt's reconstructions rely on the two dialects of Purser's dictionary (one of Sgaw and one of Pho) and on Luce's data, which covers Southern Karen (Pho, Sgaw, Paku), Bwe (Western: Blimaw and Geba; Eastern: Kayah), and Pa-O (Jones' Taungthu). The Padaung group (on which I have seen no data) and Palaychi (used by Jones) are not included. For words which appear both in Luce's material and in Jones, I have modified Haudricourt's reconstruction in order to account for the additional data. For words which I would not trace in Luce's material, I used Jones' data, and supplied a tentative reconstruction along the lines of Haudricourt's theory.

It should be emphasized from the start that exception is the norm among Karen cognates, and that sets that are regular in tone and segments throughout the sixteen speech forms contained in Jones' and Luce's data are extremely rare. The segmental reconstruction of Karen is far from complete, and the tones may seem to show more regularity simply because the number of possible permutations is smaller.

Still, as far as tone is concerned (except for Luce's small group V)⁸ the

⁶ Cf. Haudricourt 1975, and Mazaudon 1977:14-16.

⁷ I have, among other things, simplified the reconstruction of vowels; Haudricourt's more detailed system was established on the basis of Purser's two dialects, for which it could account, but would have needed reworking to accommodate new data. Rimes including final stops with different points of articulation have to be reconstructed at the PK level. This was out of the scope of this paper. Burling's finals are often contradicted by Pa-O data when it becomes available, so I have preferred to remain vague about the final when Pa-O data was lacking.

⁸ Class V (including Va) was first neglected by Haudricourt, who now proposes a

grouping of individual items into classes by Luce and by Jones (1961), and the reconstruction of the proto-tones by Haudricourt (using Luce and Purser) and by Jones (using his own material) coincide rather well. Classes I, II, and III of Luce, reconstructed with tone *A by Haudricourt, contain roughly the same lexical items for which Jones (1961) reconstructs a *Low tone, while classes IV, VI, and VIa, reconstructed with tone *B by Haudricourt, contain those items for which Jones reconstructs a *High tone (see table).⁹

Therefore I have taken the risk of ignoring some of the details of the reconstruction of rimes and initial clusters, and proceed with the comparison of the tone classes of items which look more or less alike in meaning and segments between the Karen and the Tamang groups.

III. Proto-Tamang

The Tamang side of the comparison is of course less problematic, being located at a much lower level on the family tree. Tones and segments correspond well between the ten speech forms which I use to various degrees for reconstruction.¹⁰ The tonal split has been only two-way with the unmerging series of phonemes (here the aspirate) always siding with the high series (here the voiceless consonants), and there have been no subsequent mergers of tones. Hence, ideally, any one of the modern dialects should suffice to establish the tonal category of a word at the Proto-Tamang level. Here is how the modern tones correspond to the proto-initials and proto-tones:

third proto-tone to account for it, whereas Jones reconstructed V as *low tone with final -h and unaspirated initial, and treated the members of Va as exceptions. We must admit that considering the large number of irregular correspondences which remain even after accounting for V and Va, it may not be worth worrying too much about the dozen or so words of class Va or even for that matter about the thirty-odd members of V and Va combined.

⁹ Burling puts the 6 tones of modern Pa-O back into the proto-language; thus his proto-tones do not correspond one to one either with the *A/*B - *Low/*High reconstructions, nor with the modern tone correspondences as reflected in Luce's classes (as modified by Jones). All of these systems of course easily convert into each other if you also take into account the reconstructed mode of articulation of the initial; except that Luce's set III can not be distinguished from Va in Burling's reconstructions (this involves only 3 items: J.104, J.724, and J.725), and from set V if the initial is *ʃ (e.g. J.223 'hear' which belongs to Luce's class III is reconstructed as *ʃun⁴ by Burling, and J.178, Luce's class V, as *ʃa⁴, with the same tone and the same initial. This last problem could be solved by reconstructing *ʃw for class V words, parallel to *ʃw).

¹⁰ Three dialects of Tamang spoken in the villages of Risiangku (my own data), Sahu or Sahugaon (Taylor and Hari), Taglung (my data); three dialects of Thakali, spoken in Tukche (Hari), Marpha, and Syang (my data); one dialect of Gurung (village of Ghachok, data from Glover); Manangba (seems homogeneous, my data); and secondarily, the languages spoken by people of the Nar Valley, and by the inhabitants of Tangbe village. All of these are closely related but the internal family tree is not obvious. For locations, see my 1978 paper (but note that Taglung is misplaced on the map; in fact it is a few km. north of Kathmandu.)

	*A	*B
*voiceless (aspirated or not)	2	1
*voiced	4	3

1, 2, 3, and 4 represent sets of lexical items in regular tone correspondence; I have given the phonetic realization in eight dialects in Mazaudon 1978.

Note that in my own papers on Tamang, where I reconstructed PT tones independently, without consideration of PST, I have called the tone corresponding to modern 2 and 4 PT *B, and the tone corresponding to modern 1 and 3 PT *A. Here I will use Benedict's lettering, as in the table above, for both PT and PTK.

Thus Benedict's hypothesis is that PT *A and PK *A reconstruct to PTK *A, and PT *B and PK *B to PTK *B.

After each reconstructed item in the sets below, I include in parentheses the modern tone category it belongs to, in Roman numerals from I to VIII for Karen (according to Luce's classification as modified by Jones) and in Arabic numerals from 1 to 4 for Tamang. I do this to allow for the possibility of error in the identification of which modern tones derive from a given proto-tone within each subfamily. For example, in Tamang it is certain that 1 and 2 were high allotones derived from voiceless initials, and that 3 and 4 were low allotones derived from voiced initials. It is clear that PT had only two tones; let us call them I and II and say that they were the ancestors of 1 and 2 respectively. But was 3 the low allotone of I or of II? Our only clues are the modern phonetic features of the tones, which are very variable and uncertain. Associating 3 with 1 rather than with 2 is only our best bet for the moment. The same is true of Karen. Even allowing for an error at that level, if a relationship existed between the proto-tones of Tamang and Karen, this should be revealed by the direct comparison of the modern tone categories.

IV. Correspondence sets¹¹

4.1 Sets showing Proto-Karen *A corresponding to Proto-Tamang *A

4.11 Proto-Tamang voiceless initials (tone set 2 of modern languages)

4.111 As showing regular reflexes of PST tone *A, Benedict quotes the following PT words (Benedict's reconstruction): *hle 'tongue', *hna 'sick', tshi 'fat, grease', *cham 'hair', *hla 'moon', *hmwi 'silver', *cha 'pain', *pw[e]i 'chaff/straw', *tshar 'new', *-pra 'ashes', and *thuj 'drink'.

¹¹ In the transcription of PK forms I use Haudricourt's tonal marks: *A unmarked, *B marked ', and *B' marked ". I mark *C with -? when I cannot reconstruct the final stop. A final -N means an unidentified nasal final. The rest is according to IPA.

I reconstruct PT forms from more than one dialect. When I have data in only one, I indicate this by the dialect code: Ris for the Risiangku dialect of Tamang, Gur for the Gurung dialect of Ghachok, and by the full name of the village for less often quoted dialects.

In each set the Karen word is quoted with its reference in Jones 1961 (J.) and in Luce's manuscript (L.).

I will first discuss these words from the point of view of the PT reconstruction and of the regularity of their correspondence with their proposed PK cognates.¹²

'tongue'

(1) J.111, L.928 PK *ble(I); PT *hle^A(2) 'tongue'

We may note first that the PK initial is voiced (low series). So this is not a perfect cognate.

Secondly, PK *bl- corresponds variously to:

PT *bl-:

L.1306 PK *bla' (IV) or L.1041 PK *plɛ (II) 'set free'; PT *bla^B (3) 'untie'. J.485, L.1007 PK *phla? (VIII) 'wiggle free' is probably an allofam.

PT *br-:

J.106, L.1329 PK *blai' (IV); PT *bre^A (4) 'slave'

PT *pr-:

J.568, L.1349 PK *blu' my' (IV-IV) 'betel'; PT *prum/prumo^A (2) 'Zanthoxylum alatum'

PT *hmj-:

J.296, L.1340 PK *bly' (IV); PT *hmjo^B (1) 'insane'

J.297, L.1304 PK *bla' (IV); PT *hmja^B (1) 'arrow'

None of the above correspondences looks any better or worse than the PK *bl- / PT *hl- correspondence found in 'tongue'.

Equally varied correspondences can be quoted for PK labial + /l/ clusters in mid or high initial series (*glottalized, *voiceless unaspirated, and *aspirated initials):

PK *pl- / PT *bj-:

J.644, L.- PK *plɔN (II) 'young'; PT *bjon^A (4) 'young man'

PK *ʔbl- / PT *hl-:

J.550, L.- PK *ʔblai' (VIa); PT *hlep^B (1) 'left over'

PK *ʔbl- / PT *bl-, ml-:

J.445, L.1635 PK *ʔbləN' (VIa) 'to gore'; PT *blo:/mlo^A (4) 'to prick'

PK *phl-, ʔbl- / PT *pl-:

J.202, L.1175 PK *phle (III) / ʔble (II); PT *ple^B (1) 'slippery'

The uncertainty of segmental correspondences between PK and PT does not invalidate 'tongue' as a cognate set, but it suggests that PK *ble and PT *hle^A are just as likely to be a pair of allofams of regular cognates. This is a serious problem since morphological variation of tone is present in the ST

¹² Benedict's PK reconstructions can be found in the tables of his 1972 and 1973 papers.

family at many different levels in the family tree. Still if we are to try to establish potential correspondences at the PTB level, all we can do, in the present state of our knowledge, is to take an educated guess as to the "best possible" cognate. With this in mind I will consider 'tongue' as a "good cognate set" and count it as an example of the *A/*A tone correspondence. I will not repeat for the following sets (Benedict's or my own) the demonstration of their dubious standing. The assumption (or the hope) of teleo-reconstruction as I see it is that if the same level of confidence is attained for all sets, bad cognates should even out in terms of the hypothesis we are trying to check.

'sick'

From Benedict's tables I gather that the PK form one might pair up with PT *hna^A 'sick' is PK *hna^A 'bewitch'. I cannot trace in either Luce or Jones a set meaning 'bewitch' which would derive from PK *hna^A. But in any case, for meaning, the following looks more satisfactory:

J.93, L.- *hna? (VIII) 'to suffer; PT *hna^A (2) 'be sick'

The Karen reflexes imply proto-tone *C (checked syllable) with an initial of the high series (aspirated). Hence this does not exemplify the *A/*A correspondence, nor is it a counter-example.

Another problem raised by this set is the choice of the proper Tamang cognate since we have two related roots in this semantic area: *hna^A 'sick' and *na:^A (> Ris ⁴na:) 'to bear (suffering)'. Since the PK tone does not match in any case, we won't try to solve that problem.

'fat' and 'hair'

According to Benedict's tables PT *tshi^A 'fat, grease', and *cham^A 'hair' (for which incidentally I see no reason to reconstruct a palatal initial different from the initial of *tshi) have no correspondent in Karen but correspond to Burmese tone *A words. For 'hair' I would propose the following sets:

J.39, L.1666 PK *tshon' (VI); PT *tsham^A (2) 'body-hair'

The Karen cognate turns out to be tone *B rather than *A, and so this set is a counter-example.

'moon'

The Pa-O form lã (J.379) implies a PK form *hla^A (Benedict's reconstruction), but the tones of Pho show an initial of the mid series. So this set is reconstructed as *ʔla (II) by Haudricourt. In either case the tone remains *A, and the set can be accepted as an example of the *A/*A correspondence.

(2) J.379, L.1020 PK *hla (III)/ ʔla (II); PT *hla^A (2) 'moon'

'silver'

PT *hmwi^A does not seem to have a Karen cognate. The proto-Tamang form

should rather be reconstructed as *mwi^A since out of six dialects where the form was recorded, five have tone 4 (*A-voiced) and only one has tone 2 (*A-voiceless).

'pain'

The PT form *cha^A (in fact *tsha^A) 'to hurt (as a wound)' looks like a perfect cognate for PK *tsha (III) 'to be sick':

(3) J.165, L.1137 PK *tsha (III); PT *tsha^A (2) 'to be in pain'

But note the presence in Risiangku Tamang, alongside the 'good' cognate ²tsha 'to hurt', of the word ¹tshawa 'fever', which reconstructs with tone *B, PT *tshawa^B (1).

This last form does not invalidate, in my opinion, the value of set (3) as an example of the *A/*A correspondence, since disyllabic words in Tamang languages have tones which cannot be predicted in any simple way from the tones of either or both of their syllables when these also exist as free morphemes in the language. As a consequence, no disyllabic word can be compared to a monosyllabic word, and no syllable extracted from a disyllabic word can be used for comparison, particularly of tone. In the Tamang languages, syllable extraction is a particularly serious sin since according to both my own and the SIL analyses polysyllabic words carry word tones, which are not divisible into successive syllabic tones, even synchronically.

Karen has syllabic tone. Even so, Eugénie Henderson (1961, 1973) has shown, on the example of Western Bwe, that tone sandhi modifies the tones of individual syllables when they enter into composition to form a word. Of course some of Jones' polysyllabic Karen entries are phrases rather than single words, and we may hope that the tones have not changed, but here again extreme caution is indicated.

On these grounds I would deny any reality at all to a truncated form such as Benedict's next Tamang reconstruction:

'ashes'

The form PT *-pra^A cannot be reconstructed on the basis of the modern Tamang languages. All Tamang languages have a disyllabic word which reconstructs as *hmepra^B (1). The fact that we may recognize in it the roots for 'fire' and 'ashes' does not allow us to break it up into two words at the Proto-Tamang level.

The same etymon¹³ is found in Ris ²sapra 'earth, soil' from PT *sapra^A. Note the difference in tone, which remains mysterious to me, since the first syllables of these two words, when used as free morphemes, have the same tone: Ris ¹me 'fire' from *hjme^B and Ris ¹sa 'ground' from *sa^B.

'chaff, straw'

¹³ I believe this etymon is the same as (or an allofom of) PT *bra^A (4) 'flour', which must at some point have meant 'dust' or 'powder', and is probably related to Karen J.848 *prau? (VIII) 'dust, powder'. The only other likely allofom of PT -pra is Pa-O pha^B < *pha^B (III) (J.363) 'ashes'.

On the basis of Gurung and Thakali, I would reconstruct PT **pwi*^A (2) rather than **pwei*. Note that the first syllable of Risiangku and Sahu Tamang ¹*polua* 'chaff' (with a different tone) must also be cognate with the K **phe* / T **pwi*^A root, while its second syllable is cognate with PK **lau*^B 'straw' (J.509, L.1372).

We could also compare the Pa-O form *bèphù* 'straw' (J.509) with Pa-O *phè* 'chaff' (J.220), and wonder whether *phù* is not just as good a match for PT **pwi* as *phè*. This would not change the tone correspondence, but the uncertainty is annoying, unless we want to think of the two Pa-O forms as co-allofams of the same etymon (?). In spite of this objection, I think we can accept the proposed set and count it as number 4:

(4) J.220, L.1174 PK **phe* (III); PT **pwi*^A (2) 'chaff'

'new'

(5) J.171, L.1236 PK **saN* (III); PT **tshar*^A (2) 'new'

'drink'

Benedict only claims a Burmese-Lolo cognate for PT **thurj*^A (2), and I have not been able to trace a Karen cognate for it either.

So we remain with only the following 5 words showing a correspondence between PK tone *A and PT tone *A: 'tongue', 'moon', 'pain', 'husk', and 'new'.

4.112 To this list we could add a few more sets.

a) PK aspirated initials (Luce's tone class III)

(6) J.164, L.1160 PK **tshi* (III); PT **tsjuj*^A (2) 'ten'

(7) J.225, L.1240 PK **hmin* (III); PT **hmin*^A (2) 'ripe'

(8) J.103, L.1171 PK **hrwɛ* (III); PT **hnis*^A (2) 'seven'

(9) J.273, L.1257 PK **hnəm* (III); PT **hna:/hnaj*^A (2) 'to smell, sniff'

(10) J.199, L.1263 PK **səm* (III); PT **swam/sam*^A (2) 'three'

'seven', 'sniff', and 'three'

These three words have a Palaychi reflex under the tone which Jones transcribes 'q, which normally derives from a PK tone *B or *B' with an initial of the high series. In Pa-O the tone of 'three' is the regular reflex of *A-high (III); but the tones of 'seven' and 'sniff' are irregular. If we follow the majority of dialects we can accept sets (8), (9), and (10).

'insert/ force into a hole/ thread a needle'

Jones' set J.606 'insert' can be reconstructed as PK **shwi* or **tshwi* (III) which would match PT **sju*^A (2) 'thread a needle'. But Luce has a set which looks very similar in his class Va (*B'-high): L.1441 PK **shwi*" / **tshwi*" (Va). This classification, and the reconstruction of the set as *B', rely on the tones of Zweekabin Pho and Western Bwe in Luce's data. Since *B' may have a secondary origin, we might want to consider Luce's set as containing forms which are allofams of those derived from *A-toned forms. In this case, the

*A/*A correspondence for this root could remain valid.

On the Tamang side we may note a series of allofams (under tone *B): *sju^B (1) 'a sheath', Gur ¹tswi <*tswi^B 'to pierce, prick', Ris ³tswi <*dzwi^B 'larding needle'. So we will keep this set with a question mark.

(11) J.606, L.- PK *shwi/tshwi (III); PT *sju^A (2) 'insert in a hole'
'stomach'

(12) J.358, L.1276 PK *phom (III); PT *pho^A (2) 'stomach'

The root appears in compounds in Jones, but as an independent monosyllable in Luce. So this is also a questionable set.

Note that PT *phum^A (2) 'egg' could also be cognate.

'to dry'

(13) J.831, L.1196 PK *su/swi (III); PT *sar^A (2) 'to dry'

The Pa-O form from J.152, L.1247, with the same meaning, might be an even better match for PT *sar^A: Pa-O sɛŋ is likely to derive from PK sɛŋ (III). So we can take our choice between (13) and (13a).

(13a) J.152, L.1247 PK *sɛŋ (III); PT *sar^A (2) 'dry'
'unripe/ raw'

J.-, L.1242 PK *sin/tshim (III) 'green, unripe'; PT *tshin^Bkai^B (2) 'raw'

The PT form is reconstructed on the basis of Ris ²tshin^Bkai, and is certainly cognate with Karen 'green, unripe', but this set should not be counted as showing an etymological *A/*A correspondence because the Tamang word is disyllabic. It might show a tone shift as in the doublet PT *piŋ^B / piŋ^Bkai^A 'green'. But we cannot count on it since a doublet like PT *hmlaŋ^A / hmlaŋ^Akai^A 'black' shows no tone shift.

b) PK glottalized or voiceless unaspirated initials (Luce's tone class II)

Besides set (2) 'moon' already quoted, we find the following:

(14) J.142, L.1016 PK *ʔda (II); PT *ʔhan^A (2) 'to spread out (esp. manure in Tamang)'

(15) J.381, L.1118 PK *puN (II) 'heap'; Ris ²phun < PT *phun^A 'assembly'

(16) J.-, L.1022 PK *kwi (II) 'lake'; PT *kju^Ai (2) 'water'

Note that PT *gjo^Bi (3) 'pond' is certainly a possible cognate too, with the wrong tone.

c) PK voiced initials (Luce's tone class I)

Besides set (1) 'tongue', already quoted, we find only roots which are disyllabic on one side or the other.

So the maximum number of words we can claim to show a correspondence of PK tone *A to PT tone *A-voiceless is 16. We will now list examples of PK tone *A words corresponding to PT tone *A words with a proto-voiced initial (tone set 4 of modern languages).

4.12 Proto-Tamang voiced initials (tone set 4 of modern languages)

4.121 As regular reflexes of PST tone *A words with a proto-voiced initial in PT, Benedict quotes only two words: *dim 'house', and *gway 'bee'.

'house'

This word, Benedict says (1972:29), corresponds in tone to Burmese *im^A*, but disagrees with Karen **hyi[m]^B*. From our point of view here it will have to be counted as a counter-example.

'bee'

This word on the contrary is said to disagree with Burmese but agree with Kuki. It also agrees with Karen, and we can accept the following set as a case of *A/*A correspondence:

(17) J.-, L.1031 PK *kwɛ (II); PT *gwai^A(4) 'bee'

4.122 To this set we may add the following:

a) PK aspirated initials (Luce's tone class III)

(18) J.226, L.- PK *hni (III); PT *ni:^A (4) 'two'

(19) J.200, L.1198 PK *tshru (III); PT *du:^A (4) 'six'

(20) J.617, L.- PK *hlwe (III); PT *wam^A (4) > Ris ⁴wam 'to coax'

The following three seem a little more dubious either because of semantic or phonetic distance:

(21) J.198, L.- PK *hlo (III) 'spread out e.g. to dry'; PT *lom^A (4) 'dry over the fire'

(22) J.620, L.- PK *hniN (III) 'gizzard'; PT *net^A (4) 'liver'

(23) J.602, L.- PK *shu/tshu (III); PT *sjop^A (4) 'pound paddy'

The last possible set:

J.146, L.1270 PK *thəm (III); PT *tut^A (4) 'to pick up'

I think we should not count, first because of a rather extreme difference in segments, and secondly because of another possible Tamang allofam **thu^B* (1) 'to pick (flower or fruit)'.
b) PK glottalized or voiceless unaspirated initials (Luce's tone class II)

Besides 'bee', set (17), already quoted, we find:

(24) J.644, L.- PK *plɔN (II) 'young'; PT *bjon^A (4) 'young man'

c) PK voiced initials (Luce's tone class I)

- (25) J.117, L.910 PK *rja (I); PT *bra^A/gjar^A (4) < **brgja^A 'hundred'
 (26) J.438, L.- PK *gra (I) / gra (VII); PT *jap^A (4) 'to winnow'

The Karen words for 'winnow' seem to derive from two allofams: Palaychi and the two dialects of Sgaw from an open root under tone *A, the two dialects of Pho from a checked root (tone *C). It is hard to say what is a cognate and what is an allofam in this set.

The above 26 sets are the very best I could find in support of a possible correspondence of PK tone *A and PT tone *A. I believe that at least three or four of them are outrageous and should be dismissed. Let us admit that we have about 20 to 26 valid cognate sets in favour of our hypothesis. Before going on to listing counter-examples, we may point out a discrepancy between Tamang and Karen: note that even for PT words with a voiced initial we find more supposed cognates in PK that have a voiceless aspirated initial than any other initial.

4.2 Showing Proto-Karen *B corresponding to Proto-Tamang *A

4.21 Proto-Tamang voiceless initials (tone set 2 of modern languages)

4.211 As Tamang words under tone PT *A instead of the tone *B which he expected on comparative grounds, Benedict quotes: *-ŋa 'fish', *syiŋ 'wood/firewood', and *hmwi 'body hair'.

'fish'

The word cannot be used because it is disyllabic in all Tamang languages and reconstructs as *tarŋa^A (2).

'body hair' does not seem to have a Karen cognate.

'wood'

This word cannot be dismissed as a counter-example, since the *B > *A tone shift with sibilant initials which is called upon to explain its tonal "irregularity" is in no way systematic in Tamang: cf. the following which remained tone PT *B: *si^B (1) 'to die', *swa^B (1) 'tooth', *sja^B (1) 'meat', to mention but a few.

- (27) J.49, L.1619 PK *siŋ'(VI) 'tree'; PT *siŋ^A (2) 'wood'

4.212 To this set we could add the following:

a) PK aspirated initials (Luce's tone class VI)

- (28) J.39, L.1666 PK *tshɔŋ' (VI); PT *tsham^A (2) 'body hair'

- (29) J.247, L.1593 PK *tshaN' (VI); PT *tshan^A (2) > Ris ²tshan 'push'
 (Ris 'with the foot')

- (30) J.40, L.1472 PK *tshra' (VI); PT *sar^A (2) 'star'

Note that in the disyllabic form used in Risiangku Tamang, whose first syllable is the same etymon, the tone is different: ¹karcen (tone *B); cf. Tib. skar-ma.

(31) J.801, L.1200 PK *tshru' (VI); PT *khru^A (2) 'to wash'

The Karen root is wrongly classified by Luce as class III (*A-high). The tone of Sgaw in his own as well as in Jones' data implies class VI (*B-high).

(32) J.110, L.1537 PK *hmai'(VI); PT *hmes^A (2) > Ris ²mes 'mole, wart'

Note the difference in tone with the probable allofam Ris ¹menpo 'scar' (tone *B-high).

(33) J.246, L.1469 PK *kha' (VI) 'jaw'; PT *kam^A (2) 'chin'

The form PT *(g)am^B 'molar', which Benedict derives from PTB *gəm^B 'jaw, molar' (1973:32) has no reality at the Proto-Tamang level. It is extracted from a Tamang disyllable *grampa/u^B (3) 'cheek'. 'molar' in Tamang is a compound 'cheek-tooth' (e.g. Ris ³krampa-¹swa).

(34) J.-, L.1561 PK *su' (VI) 'hide'; PT *sum^A > Ris ²sum 'smuggle'
'saliva'

J.245, L.- PK *tho' (VI); PT *tho^A (2) 'saliva'

cannot be retained because the word is polysyllabic in Karen.

b) PK glottalized or voiceless unaspirated initials (Luce-Jones' tone class VIa)

(35) J.349, L.1598 PK *ʔdaN' (VIa); PT *tha:^A (2) 'to cut'

Note that J.398, L.- PK *daiʔ (VII) 'cut with scissors' is also a plausible cognate for PT *tha:^A, which would in that case correspond to a PK tone *C.

(36) J.151, L.1664 PK *sɔn' (?VI/VIa) 'teach'; PT *hun/hjon^A (2) 'show'

The tone of Palaychi implies a *B mid series (VIa), but no sibilant is usually reconstructed in the mid series. Since P1 has much unexplained tonal variation, largely morphological, we need not posit a different initial solely on this evidence.

(37) J.337, L.1466 PK *ka' (VIa); PT *khray^A (2) 'to roast'

The semantic area 'roast, burn, hot, fry, cook' will serve to illustrate the typical problem encountered as soon as we have relatively rich data on the languages we are comparing. This word family boasts a large number of allofams (or are they haphazard near homonymo-synonyms?) on the Karen side as well as on the Tamang side. If we stick to meaning as the main criterion in the identification of cognates, we must propose set (37) as a cognate set. If, remaining in the same semantic neighborhood, we want to adjust segments, we could consider either (37a) or (37b) as the proper cognate for PT *khray^A:

(37a) J.541, L.- PK *k(h)rəN' (VIa/VI) 'overcook'

(37b) J.627, L.- PK *khrɔN (III) 'scorch'

Note that this last set would exemplify a PK *A / PT *A correspondence while (37) shows PK *B / PT *A.

But Tamang *khrəŋ^A really means 'roast, incinerate', not 'scorch'. The word for 'scorch' is PT *kro(:)^B (1), which is segmentally close enough to the Karen word of the same meaning for the following set to be considered plausible:

(38) J.627, L.- PK *khrəN (III); PT *kro(:)^B (1) 'burn, scorch'

This time we have a PK *A / PT *B tone correspondence!

The next stop on our zigzag path between segmental and semantic resemblance is set (38a):

(38a) J.355, L.1455 PK *kro" (V) 'roast, singe on charcoal'; PT *kro(:)^B (1) 'burn, scorch'

which is segmentally perfect...and illustrates the PK *B' / PT *B tone correspondence.

Slightly further afield we meet PK *go'(IV) 'hot' (J.6, L.1358), identical to the first syllable of PK *go' (IV) -(g)rɔʔ (VII) 'to char, burn black' (J.841, L.-) both syllables of which could be compared to PT *kro(:)^B 'burn'.

Finally let us list a few more allofams on both sides: Karen J.517 *grwə' (IV) 'to burn off land', and J.720, L.1216 *khlaN (III) 'to boil', which actually matches rather well Ris ²khwal < *khwal^A 'cook by boiling'; Tamang *ro:^A (4) 'to fry', possibly PT *ŋjo^B (3) 'cook', and, somewhat unlikely, PT *dot (3) 'warmth' (*d- probably from **dr- rather than **gr-).

Conclusion 1) We will not count any set from this series in the checking of our hypothesis.

Conclusion 2) We are much happier about our sets when we have insufficient data... which does not mean of course that they are better.

c) PK voiced initials (Luce's tone class IV)

(39) J.1, L.1419 PK *bɔŋ' (IV) 'burst with a pop'; PT *por^A (2) > Ris ²por 'to pop, of corn' or PT *pho:^A (2) > Ris ²pho: 'to burst'

(40) J.4, L.1415 PK *dɔŋ' (IV); PT *to^A (2) 'to pound grain'

J.524, L.1456 PK *ʔdo" (V) 'beat' (tone *B') is also a possible match for PT *to^A 'pound, beat'. If we accept considering *B' as secondary, we can retain set (40) as valid.

(41) J.503, L.- PK *dzəN' (IV); PT *tsim^A (2) > Ris ²tsim 'extend in a line'

(42) J.-, L.1392 PK *gi' (IV); PT *khi^A (2) 'to tie, bind'

PK *gi' can be posited from Sgaw, Paku, and one dialect of Bwe (Blimaw tone 3 is irregular).

'rise, get up'

J.196 seems to include two roots PK *rɛ (I), accounting for Sgaw, Palaychi, and Moulmein Pho, and PK *(g)rai' (IV), accounting for Pa-O and Bassein Sgaw. The first root seems to correspond well to PT *Hre:/hre:^B (1), and will be listed with the PK *A/PT *B correspondences. The second one could be compared to PT *hrap^A (2) 'be standing up', and would be an example of the PK *B/PT *A tone correspondence.¹⁴

After elimination of the most dubious sets, we come to about 14 words showing a correspondence between Karen tone *B and Tamang tone *A, when the PT initial was voiceless, to be compared to the 16 words showing a correspondence between Karen tone *A and Tamang tone *A, under the same conditions. A rather even score. Let us now check words with a proto-voiced initial in Tamang.

4.22 Proto-Tamang voiced initials (tone set 4 of modern languages)

4.221 Benedict quotes PT *blu^A 'seed' as tonally deviant as compared to Burmese. It is also deviant as compared to Karen:

(43) J.-, L.1420 PK *blɔN' (IV) 'vegetable shoots'; PK *blu^A (4) 'seed'

'house', discussed earlier §4.121, should be listed as an example of PK *B to PT *A correspondence:

(44) J.804, L.1613 PK *hriN' (VI); PT *dim^A (4) 'house'

4.222 Here are some more counter-examples of the same category:

(45) J.-, L.1507 PK *hni' (VI) 'skirt'; PT *ŋjoi^A (4) 'skirt, sari'

(46) J.-, L.1569 PK *phro' (VI) 'pimple'; PT *bro^A (4) 'small-pox'

(47) J.-, L.1662 PK *hmɔN' (VI) 'think of'; PT *man^A (4) 'to love'

This last word is disyllabic in Karen so we have to dismiss it.

b) PK glottalized or voiceless unaspirated initials (Luce-Jones' tone class VIa)

(48) J.-, L.1661 PK *ʔbɔŋ' (VIa) 'plump, fat'; PT *baŋ^A (4) 'strength'

(49) J.-, L.1668 PK *ʔdɔN' (VIa) 'to enclose'; PT *ɕuŋ^A (4) 'to close'

(50) J.350, L.1530 PK *ʔdwai' (VIa); PT *di^A (4) 'kindle, light a lamp'

(51) J.445, L.1635 PK *ʔblɔN' (VIa) 'gore'; PT *blo:/mlo^A (4) 'prick'

(52) J.335, L.1567 PK *tso' (VIa); PT *ro^A (4) 'corpse'

c) PK voiced initials (Luce's tone class IV)

(53) J.106, L.1329 PK *blai' (IV); PT *bre:^A (4) 'slave'

(54) J.107, L.1315 PK *li' (IV); PT *bli^A (4) 'four'

(55) J.108, L.1331 PK *ñai' (IV); PT *ŋa:^A (4) 'five'

(56) J.501, L.1367 PK *glau' (IV); PT *glap^A (4) 'ox'

¹⁴ Note that we have to distinguish at the PT level between voiceless sonorants, which I write here with an h, and "aspirated" ones, probably derived from an initial stop which cannot be reconstructed at the PT level, which I transcribe H. In Risiangku Tamang the result of this alternation is a doublet ¹hre:/¹re: 'to get up'.

(57) J.298, L.1352 PK *dy' (IV) 'to string beads'; PT *dup^A (4) 'to sew'

J.203, L.1308 PK *ma' (IV) 'be lost'; PT *ma^A (4) 'lose'

The Karen word is disyllabic, so this set cannot be counted.

(58) J.14, L.1383 PK *lam' (IV) 'place, track'; PT *gjam^A (4) 'road'

This makes a total of 13 or 14 words showing a tonal correspondence PK *B / PT *A, when the PT initial is voiced, as compared to about 10 words showing an *A/*A correspondence with the same initials (§ 4.12). Here again a rather even score. We must admit that we have not been able to establish a correlation of Proto-Tamang tone *A with either one of the tones reconstructed for Proto-Karen. We will try to see now if Proto-Tamang tone *B shows a regular correspondence with either one of the two PK tones.

4.3 Sets showing Proto-Karen *B corresponding to Proto-Tamang *B

4.31 Proto-Tamang voiceless initials (tone set 1 of modern languages)

4.311 As regular reflexes of PST tone *B in Proto-Tamang, Benedict cites the following words (in his PT reconstruction): *kli 'feces', *hmei 'fire' and 'tail', *sa 'tooth', *h^hem 'soft', *-hli 'bow', *hmya 'arrow', *-ku 'smoke', *sya 'flesh, meat', *syi 'die', and *hmu 'sky'.

'feces'

PT *kli^B (1) does not seem to have a Karen cognate.

'fire' and 'tail'

Benedict reconstructs these words as homonyms, PT *hmei^B, and compares them with PK *hme^B 'fire' (1973:134) and PK *me^B 'tail' (1972:32). However these words are homophonous in only two Tamang languages. On the basis of six others I reconstruct a difference in both length and vowel quality. The latter is paralleled in Karen, where 'tail' has a more open vowel than 'fire'.

(59) J.109, L.1526 PK *hme' (VI); PT *hmje^B (1) 'fire'

(60) J.20, L.1327 PK *me' (IV); PT *hme:^B (1) 'tail'

'tooth'

In Tamang this word should be reconstructed as *swa^B (1) rather than *sa^B. Benedict reconstructs the Karen cognate with tone *B as in Burmese and Kuki (1973:134). But Luce classes the word in his class III, which is *A-high. Haudricourt (1946:106), using different data (Purser's dictionary¹⁵), also reconstructs 'tooth' with tone *A. In Jones this root is only represented by Bassein Pho *θwà* and Palaychi *shzùq* (J.521). If we take the tone of P1 seriously, which may not always be wise, these two forms leave us the choice between *B (or B')-mid series, and *A-high series. Since *θ* is usually an initial of the high series, we might prefer a *A-high reconstruction. Luce's data on Bwe points to the same reconstruction. His Western Bwe form *θo¹me³*

¹⁵ Haudricourt cites this work as: W. C. Purser, *A Comparative Dictionary of the Pwo-Karen*, Rangoon, 1922. I have not used it.

cannot be used as an argument since it may have suffered from tone dissimilation in composition¹⁶, but his Geba form **əu¹** which is monosyllabic, also has tone 1 (<*A) rather than tone 2 (<*B). It seems to me that PK ***swa** (III) is the most likely reconstruction for 'tooth', and so the correspondence:

J.521, L.1148 PK ***swa** (III); PT ***swa^B** (1) 'tooth'

exemplifies the PK *A / PT *B correspondence, and should be counted as a counter-example if anything.

'soft'

In Risiangku Tamang I recorded the form **²nem** 'to be soft' which derives from PT ***hnem^A** rather than from a PT tone *B form. I think Benedict's error comes from Pittman and Glover's set 79 which collapses two different words into an extended semantic notion 'to hear, obey, be soft'. 'listen, obey' is PT ***hŋjan^B** (1) > Ris **¹ŋjan**, Sahu **¹ŋen** (phonetically [ñem-] in front of the -pa suffix of the present). So the word 'soft' does not agree in tone with Burmese **nam^B**. I could not trace a Karen cognate for it.

'bow' and 'smoke'

The forms cited are second syllables of disyllabic words. They cannot yield any tonal information.

'arrow'

I believe Benedict only claimed a Burmese match for this word: PT ***hmja^B** (1), Burm. **hmca^B**. I have proposed above the following Karen match:

(61) J.297, L.1304 PK ***bla** (IV); PT ***hmja^B** (1) 'arrow'

'flesh/meat'

To PT ***sja^B** (1) 'meat', Benedict probably only associates a BL cognate since the Karen homophonous roots PK ***hña** (VI) 'meat' (J.62) and 'fish' (J.255) hardly look like the perfect cognate for PT ***sja^B**. The Karen roots recall PT **tarna^A** (2) 'fish'. However it is obvious that Karen has merged a lot of different proto-material in the palatal area. Thus the Karen correspondence T j / MP j / BP j / Pl z / MS ñ / BS ñ, found in J.62 'meat', does not necessarily reconstruct to PK ***hñ-**, and can possibly correspond to PT ***sj-**. See set (68) below.

'sky'

(62) J.18, L.1341 PK ***my** (IV); PT ***hmu^B** (1) 'sky'

Thus we retain the following four or five words as examples of the correspondence between PK tone *B and PT tone *B: 'fire', 'tail', 'arrow', 'sky' and (?) 'meat'.

4.312 To these we may add:

¹⁶ Cf. Henderson 1961:68-69.

a) PK aspirated initials (Luce-Jones' tone class VI)

(63) J.33, L.1470 PK *tsha' (VI) 'fodder'; PT *tsha^B (1) 'to graze (tr.)'

The comparison between a noun and a verb which I propose here makes me uncomfortable because an ancient derivation by tone change may be involved (or an ancient segmental morpheme resulting in a tone change). Thus inside a single language of the Tamang group we find (but unsystematically!) an associated change of tone as in Ris ¹phi: (<*phi:^B) 'bark, peel'; ²phi: (<*phi:^A) 'to peel'. So I will not count set (63).

(64) J.42, L.1468 PK *kha' (VI) 'bitter'; PT *kam^B (1) 'bile'

Note also PT *kampa^B (1) 'bitter', conveniently on the same tone.

(65) J.30, L.1596 PK *thaŋ' (VI); PT *tho^B (1) 'up'

(66) J.44, L.1588 PK *khaŋ' (VI); PT *kaŋ^B (1) 'leg, foot'

(67) J.54, L.1487 PK *hla' (VI); PT *Hla^B (1)/ *lapte^B (3) 'leaf'¹⁷

(68) J.545, L.- PK *hɔŋ' (?sɔŋ'/hñɔŋ') (VI); Ris ¹sjoŋ < *sjoŋ^B 'stretch legs'

The above would account for Pho and Sgaw. Pa-O and Palaychi imply a form *jɔŋ' (IV) which is *B with a low initial. This set shows the same problematic initial correspondence as 'meat' above (§4.311).

(69) J.553, L.1503 PK *thi' (VI) 'to see'; PT *thai^B (1) 'to hear'

(70) J.205, L.1525 PK *phe' (VI); PT *pin^B (1) 'to give'

(71) J.-, L.1597 PK *than' (VI); PT *thon^B (1) 'to issue'

(72) J.-, L.1665 PK *choN' (VI) 'strong, hard'; PT *cho^B (1) 'fat, stout'

The following three sets all raise some question, and cannot be retained:

(73) J.-, L.1476 PK *gu-hna' (I-VI); PT *hɔŋjan^B (1) 'listen'

The word is disyllabic in all Karen dialects.

(74) J.43, L.1638 PK *khuN' (VI) 'to dig'; Ris ¹khwa (*B) 'turn over a field by hand'

Set (74) would be fine if Risiangku Tamang did not have a near synonym-homonym ²kwa 'to dig around plants', which could be the proper cognate for PK *khuN'. In that case we would have tonal disagreement between Karen and Tamang.

(75) J.58, L.1554 *hmy' (VI) 'woman'; PT *hmriŋ^B (1) 'wife'

PT *hmriŋ^B looks like a simple monosyllable, but at a level older than PT we can certainly break it up into two morphemes: *hm- 'woman' and *-riŋ from PTB *sriŋ 'sister' (Conspectus:108, 171), found again e.g. in Ris ³purin < PT *burin^B 'younger sister of a man' (where bu- is cognate with J.2, L.1339 PK *by' (IV) 'younger sibling'). Then PK *hmy' might be cognate with what used to

¹⁷ I would not expect the PTB *s- of *s-la (Conspectus 486) to result in PT *h-. It should rather result in PT *h-. For PT *Hl- I would rather reconstruct a stop initial at a higher level. The cognate blama 'leaf' in the Sala language of Bhutan might suggest *b-.

be the first syllable of a disyllabic word, reduced to *hm- in PT, and the tonal correspondence would be meaningless. I believe such is the case of a number of Tamang words which are now monosyllabic.

b) PK glottalized or voiceless unaspirated initials (Luce-Jones' tone class VIa)

- (76) J.550, L.- PK *ʔblai' (VIa); PT *hlep^B (1) 'surplus, leftover'
(77) J.74, L.1607 PK *ʔam' (VIa) 'eat'; PT *am^B > Ris 'am' (baby-talk noun for eating)'
(78) J.197, L.1494 PK *kri' (VIa); PT *gri^B (3)/kh(r)iti^B (1) 'body dirt'

c) PK voiced initials (Luce's tone class IV)

- (79) J.10, L.1323 PK *re' (IV) 'cane'; PT *hrin/sin^B (1) 'small bamboo'
(80) J.15, L.1404 PK *log' (IV); PT *hjuŋ^B (1) 'stone'

But note PT *hjuŋpa^A (2) also 'stone'

- (81) J.480, L.- PK *mwe' (IV), PT *hmu^B (1) 'to be'
(82) J.296, L.1340 PK *bly' (IV); PT *hmjo^B (1) 'insane'

The number of acceptable sets in this series is around 20 or 22. We will now list examples of the same tonal correspondence PK *B / PT *B when the PT initial was voiced.

4.32 Proto-Tamang voiced initials (tone set 3 of modern languages)

4.321 Benedict quotes here the following Proto-Tamang words:

*dza 'eat' and 'son', *na 'ear', *[g]am 'molar' (already discussed: §4.212 set (33) above), *mi 'man', *li 'heavy', and *bri 'write'.

'eat': should be reconstructed with a voiceless initial PT *t^sa^B (1). It has no Karen cognate.

'son', PT *dza^B (3) could be compared to PK *dza' (IV) 'young' or to PK *sa' (VI) 'offspring', both under tone *B. Note in Tamang the adjective 'small', under the same tone, PT *dzadza^B (3), and the noun 'daughter' under a different tone, PT *dzame^A (4). We could propose either of the following sets as exemplifying the *B / *B tone correspondence:

- (83) J.5, L.1296 PK *dza' (IV) 'young'; PT *dza^B (3) 'son'
(83a) J.249, L.1489 PK *sa' (VI) 'offspring'; PT *dza^B (3) 'son'

'ear'

- (84) J.21, L.1299 PK *na' (IV); PT *na^B (3) 'ear'

I could not find Karen cognates for 'man', 'heavy', and 'write'.

4.322 Some more examples of the *B/*B correspondence could be:

a) PK aspirated initials (Luce-Jones' tone class VI)

(85) J.293, L.1625 PK *hle^m' (VI); PT *le^m^B (3) 'to lick'

The Southern Pa-O form from Luce le^m²/la^m² confirms PK final -m.

(86) J.534, L.1648 PK *thoŋ' (VI); PT *do^B (3) > Marpha Thakali ³to 'bag'
(cf. Gur. ne^ó 'bag')

and (more doubtful):

(87) J.36, L.1622 PK *cheN' (VI) 'sour'; PT *dzju:^B > Ris ³tsju: 'to turn sour, rancid'

b) PK glottalized or voiceless unaspirated initials (Luce-Jones' tone class VIa)

(88) J.157, L.1556 PK *ʔy'/?wy' (VIa); PT *gui^B (3) > Ris ³kui 'rotten (Ris especially of eggs)'

(89) J.346, L.1550 PK *ʔdy' (VIa) 'abstain from'; PT *du:^B (3) 'mourning (a period of abstinence)'

The Karen forms are verbs, and the Tamang forms nouns ([to stay in] mourning.) Hence this set cannot be counted.

(90) J.70, L.1652 PK *kuN' (VIa) 'to plan'; PT *go^B (3) 'to understand'

(91) J.339, L.1645 PK *suN' (VIa); PT *zu(:)^B (3) 'to plant'

The initial PK *s with a tonal correspondence of the mid series raises the same problem that we have encountered for set (36) 'teach' (§ 4.212).

(92) J.-, L.1578 PK *so' (VI/VIa); PT *ro^B (3) 'friend'

Note the following set, forming a tone pair with the preceding for Tamang, and showing a contrast in the initial for Karen. I believe differences in the initial at a level higher than Proto-Tamang might eventually be shown to be the source of the *A / *B contrast in PT generally.

J.335, L.1567 PK *tso' (VIa); PT *ro^A (4) 'corpse'.

c) PK voiced initials (Luce's tone class IV)

(93) J.13, L.- PK *lai' (IV) 'wide'; PT *ble^B (3) > Ris ³ple 'width of cloth'

(94) J.17, L.1390 PK *lin' (IV) 'vagina'; PT *mle^B (3) 'penis'

(95) J.23, L.1353 PK *nu' (IV), PT *new^B (3) 'breasts, milk'

(96) J.486, L.- PK *dzɔN' (IV) 'to perch'; PT *dzu^B (3) 'to put or press the feet on the ground'

(97) J.204, L.1380 PK *maŋ' (IV) 'to dream'; PT *maŋ^B (3) 'a dream'

The word is disyllabic in all Karen dialects for Jones, and in all but one (Pa-O) for Luce: PK *mi (I)-maŋ' (IV). Since it is a verb in Karen it is not impossible to etymologize the first syllable as the corresponding verb ('to dream/see a dream'), which would leave the second syllable as the proper cognate to PT *maŋ^B. Too much doubt remains for us to accept this set for the moment.

(98) J.299, L.1414 *dɔŋ' (IV); PT *ɗan^B (3) 'remember, think about'

Two probable allofams could be paired up with the next PT root:

(99) J.300, L.- *dwi' (IV) 'to drag'; PT *ɗut^B (3) 'to pull'

(99a) J.214, L.- PK *thy? (VIII) 'to pull'; PT *ɗut^B 'to pull'

(100) J.-, L.1306 PK *bla' (IV) 'set free'; PT *bla^B (3) 'untie'

But note that L.1041 PK *ple (II) 'set free' is also a possible cognate, with the opposite tonal correspondence (PK *A/PT *B); cf. §4.111.

The above includes a maximum of fifteen good sets showing the tonal correspondence PK *B to PT *B, when the PT initial was voiced. Thus the total number of sets, for all initials, which can be claimed to support the hypothesis of a common origin for PK tone *B and PT tone *B is about 35.

We now have to examine the counter-examples, that is words reconstructing with PK tone *A, and with PT tone *B.

4.4 Sets showing Proto-Karen *A corresponding to Proto-Tamang *B

4.41 Proto-Tamang voiceless initials (tone set 3 of modern languages)

4.411 As examples of Tamang words which "shifted" from the original PTB tone *A to *B, Benedict quotes: *syi 'die', *-praŋ 'a fly' (found only as the second syllable of a word), *hmin 'name', and *hna 'nose'.

In the last two examples he cites aspiration as a possible cause of a shift in tone. This is unconvincing, however, because we have several tone *A words in Tamang which correspond to *A words in Karen, and which have a proto-aspirated nasal initial: e.g. sets (7) 'ripe', (8) 'seven', and (9) 'smell' above (§ 4.112). Hence these two words do count as counter-examples.

4.412 So, adding some more sets to the three quoted by Benedict, we can list the following:

a) PK aspirated initials (Luce's tone class III)

(101) J.159, L.1142 PK *pha (III) 'male'; PT *pha^B (1) 'husband'

(102) J.170, L.1166 PK *si (III); PT *si^B (1) 'to die'

(103) J.148, L.1133 PK *kha (III) 'to step'; PT *kha^B (1) 'to come'

(104) J.360, L.1284 PK *thɔN (III); PT *toŋ^B (1) 'thousand'

(105) J.521, L.1148 PK *swa (III); PT *swa^B (1) 'tooth'

(106) J.403, L.1141 PK *hna (III); PT *hna^B (1) 'nose'

(107) J.374, L.1273 PK *hroN (III); PT *hwoŋ~oŋ^B (1) 'to steam-cook'¹⁸

(108) J.378, L.1241 PK *hweN (III); PT *Hrum^B (1) 'abcess'

(109) J.611, L.- PK *swe (III) 'a chain'; PT *tsho:^B (1) 'a rope'

(110) J.615, L.1212 PK *hlau (III); PT *hlu^B (1) 'to tell a lie'

(111) J.202, L.1175 PK *phle (III)/?ble (II); PT *ple:^B (1) 'slippery'

(112) J.235, L.1170 PK *khe (III); PT *tsjan^B (1) 'tiger'

¹⁸ I have not distinguished an *r from a *ʎ in the PK forms, but it seems that Burling is right in reconstructing both. In that case 'steam-cook' would be *hʎoN, and 'salty' set (124) below would be *hʎaŋ, which would make them more similar to their PT cognates.

[for an intermediate form cf. Burmese kja³]

(113) J.-, L.1139 PK *tshra (III); PT *tshai^B (1) 'split-bamboo ties'

(114) J.-, L.1251 PK *khəŋ (III); PT *koŋ^B (1) 'firm, hard, strong'

b) PK glottalized or voiceless unaspirated initials (Luce's tone class II)

(115) J.133, L.1095 PK *tsəŋ (II); PT *tsuŋ^B (1) 'to tie'

(116) J.135, L.1132 PK *kən (?kwan) (II); PT *kwan^B (1) 'to wear'

c) PK voiced initials (Luce's tone class I)

(117) J.125, L.974 PK *min (I); PT *hmin^B (1) 'name'

(118) J.228, L.981 PK *bəŋ (I) 'pot'; PT *poŋ^B (1) 'jug'

(119) J.318, L.- PK *la (I) [all dialects but Pa-O]; PT *hla^B (1) 'god'

*lu (I) or ʔlu (II) [Pa-O]; PT *hlu^B (1) 'water-god'

(120) J.324, L.1004 PK *moŋ (I) 'to lead'; PT *hmo^B (1) 'to plough'

(121) J.330, L.- PK *ñai (I); PT *hnaï^B > Gur ʔnaï 'fibers'

(122) J.436, L.- PK *jəN (I); PT *sjat^B (1) 'to mention, tell'

(123) J.196, L.- PK *rə (I); PT *Hre:/hre:^B (1) 'to get up'

Although some of the above examples are no doubt to be dismissed, it seems we can count about the same number of valid sets in this series (around 20) as we did in the series exemplifying the PK *B/PT *B correspondence § 4.31, both series for PT voiceless initials.

4.42 Proto-Tamang voiced initials (tone set 3 of modern languages)

4.421 As a counter-example to the regular correspondence of PT tone *B with PST *B, Benedict quotes only *riŋ- 'long', whose tone, he says, disagrees with Burmese-Lolo. This word does not seem to have a Karen cognate, unless we want to compare it to J.184 *jɛ? (VII), which would be a proto-tone *C.

4.422 Some more PK *A/PT *B correspondence sets:

a) PK aspirated initials (Luce's tone class III)

(124) J.375, L.- PK *hraN (III); PT *ɣam^B (3) > Ris ɣam 'salty'

(125) J.371, L.- PK *hra (?khra) (III) 'frighten by noise'; PT *rap^B (3) 'make noise, play an instrument'¹⁹

(126) J.614, L.1193 PK *hlu (III); PT *lu:^B (3) 'to pour'

Based on only one form, Pa-O rì, we may have the following:

(127) J.279, L.- PK *hri (III); PT *rit^B (3) 'to request, beg'

but Pa-O rì can also reconstruct to PK *hri" (V or Va), which would be tone *B', our "secondary" proto-tone.

¹⁹ If the identification I propose here is correct, PK *hra^A 'frighten by noise' is a second example of loss of final PTB -p in Karen. The other one is 'winnow', our set (26) mentioned by Benedict 1979. This new etymology for PK *hra^A would remove Benedict's counter-example to his own rule that "the tonal assignment after loss of final stop from *-t or *-p is *A (two examples only [three with our new convert!]), but from *-k (the bulk of the examples) it is usually *B." (1979:6).

b) PK glottalized or voiceless unaspirated initials (Luce's tone class II)

(128) J.134, L.- PK *tsoN (II) 'apex'; PT *dzo^B (3) 'point, summit' or
(128a) J.232, L.1051 PK *tsu 'point'; PT as above

c) PK voiced initials (Luce's tone class I)

(129) J.326, L.929 PK *me (I) 'cooked rice'; PT *mla^B (3) 'husked rice'
(130) J.488, L.- PK *ñaN (I) 'to growl'; PT *ñja^B (3) 'to cry (animals)'
(131) J.313, L.1009 PK *dy (I); PT *do:^B (3) 'to reach, arrive'
(132) J.-, L.1022 PK *kwi (I); PT *gjo^B (3) 'lake, pool'

This last set was already quoted with set (16), which paired the Karen root with PT *kjui^A (2) 'water'. I think the match with PT *gjo^B is at least as good, and the two sets will thus even out!

This series of counter-examples to the hypothesis of a regular correspondence between PK tone *B and PT tone *B, when the initial was voiced in PT, yields only 9 sets, as compared to the 15 we counted in favor of the hypothesis (§ 4.32). I do not believe this difference to be significant.

For all initials, there are about 35 examples showing the *B/*B correspondence, and about 30 showing the correspondence *A/*B. Thus it does not seem that Proto-Tamang tone *B correlates with either one of the two basic PK tones.

V. Conclusion

We have considered whether a correlation could be established between the two tones of Proto-Tamang and the two main tones of Proto-Karen. With this question in mind, we have searched for as many cognates as possible to Karen words reconstructed with PST tones *A or *B according to Benedict's hypothesis. We have eliminated from that list words suspected of tonal shift inside each group (mainly due to compounding, or old morphology). For accuracy in the correspondence of segments and meaning between Tamang and Karen, we have only tried to maintain the same standards for examples supporting the hypothesis of a correlation and for those contradicting it. Counting up the sets has given the following totals:

PK *A - PT *A : 26
PK *B - PT *A : 28
PK *B - PT *B : 35
PK *A - PT *B : 30

This result has forced us to admit that a simple correlation between either of the PK tones and either of the PT tones has not been established, and still less a correlation between the two systems globally.

We have not, however, excluded the possibility of such a correlation. This would require the demonstration of a different origin for the two proto-systems, and for the moment we have not explained the origin of either.

I believe we have also shown that the demonstration of a relationship, if it exists, cannot be accomplished with the method we have used, even trying to

be critical about the material. I believe we should reach three intermediate results before this large scale comparison of tone systems be taken up again: 1) a more precise reconstruction of Proto-Karen, 2) the establishment of regular segmental correspondences between Tamang and Karen, and 3) the understanding of morphological variation of tones at the level of each sub-family. Once this is done it remains possible that Benedict's intuition will be shown to be correct. For the moment it has to remain an avenue for future research.

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